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Common lab dye shows huge anti-cancer potential

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Singapore: A new study at Moffitt Cancer Center, US, has found that an injectable solution known as PV-10, which has been developed from water-soluble dye Rose Bengal, can shrink tumors and reduce the spread of cancer. Early clinical trials show that PV-10 can boost immune response in melanoma tumors, as well as the blood stream. The dye is commonly used to stain damaged cells in the eye.

The initial study, which has been published in PLOS ONE, was supported by a sponsored research agreement with Provectus Pharmaceuticals, the developers of PV-10.

In the initial study, researchers injected a single dose of PV-10 into mice with melanoma. The result was a significant reduction in the skin cancer lesions, as well as a sizable reduction in melanoma tumors that had spread to the lungs. The researchers said the dye solution appeared to produce a robust anti-tumor immune response and may be safer than existing immunological agents.

Dr Shari Pilon-Thomas, assistant member, Moffitt's Immunology Program, said that, "Various injection therapies for melanoma have been examined over the past 40 years, but few have shown the promising results we are seeing with PV-10."

"We are currently in the middle of our first human clinical trial of PV-10 for advanced melanoma patients. In addition to monitoring the response of injected melanoma tumors, we are also measuring the boost in the anti-tumor immune cells of patients after injection," explained Amod A. Sarnaik, M.D., assistant member of Moffitt's Cutaneous Oncology Program.